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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/938,641	08/27/2001	Achim Marx	211226US0X	2808

22850 7590 09/16/2004

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

KERR, KATHLEEN M

ART UNIT	PAPER NUMBER
----------	--------------

1652

DATE MAILED: 09/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/938,641	Applicant(s) MARX ET AL.	
	Examiner Kathleen M Kerr	Art Unit 1652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,10-17,19-22,26-29 and 39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-6,10-12,19-22,26 and 29 is/are allowed.
- 6) ☒ Claim(s) 13-17,27,28 and 39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>Alignment</u> |

DETAILED ACTION

Application Status

1. In response to the previous Office action, a non-Final rejection (mailed on March 30, 2004), Applicants filed an amendment and response received on June 30, 2004. Said amendment cancelled Claims 7-9, 23-25, and 30-38, amended Claims 12-14, 16, 17, 21, 27, and 28, and added new Claim 39. Thus, Claims 1, 3-6, 10-17, 19-22, 26-29, and 39 are pending in the instant Office action and will be examined herein.

Priority

2. As previously noted, the instant application is granted the benefit of U.S. Provisional Application 60/279,415 filed on March 29, 2001 and foreign applications 10042052.4 and 10110053.1 filed in Germany on August 26, 2000 and March 2, 2001, respectively.

Certified translations of the foreign applications have been received.

Information Disclosure Statement

3. The information disclosure statement filed on June 16, 2004, citing related applications, has been reviewed.

Withdrawn – Objections to the Claims

4. Previous objection to Claim 12 under 37 C.F.R. § 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim is withdrawn by virtue of Applicant's amendment.

5. Previous objection to Claims 21 and 27-28 for using an improper genus/species name is withdrawn by virtue of Applicant's amendment.

Withdrawn - Claim Rejections - 35 U.S.C. § 112

6. Previous rejection of Claim 16 under 35 U.S.C. § 112, second paragraph, as being indefinite for the inclusion of fragments of the complement of SEQ ID NO:1 is withdrawn by virtue of Applicant's amendment deleting said fragments.
7. Previous rejection of Claim 16 under 35 U.S.C. § 112, first paragraph, new matter, is withdrawn by virtue of the Examiner's reconsideration. On pages 3-4 of the translation of priority document 10110053.1 (filed March 2, 2001 in Germany), support is found for the instant claim. Said priority document is expressly incorporated by reference and, thus, can support the amendment to the disclosure.
8. Previous rejection of Claims 27-28 under 35 U.S.C. § 112, first paragraph, scope of enablement, because the specification, while being enabling for overexpressing SEQ ID NO:1 by transforming a host cell with a vector comprising SEQ ID NO:1 and a promoter wherein the promoter is responsible for the overexpression, does not reasonably provide enablement for overexpressing SEQ ID NO:1 by means otherwise mentioned in the specification is withdrawn by virtue of Applicant's amendment limiting the claims to means of overexpression enabled by the art.
9. Previous rejection of Claim 29 under 35 U.S.C. § 112, first paragraph, enabling deposit, is withdrawn by virtue of Applicant's amendment to the specification to fully describe the deposit as well as Applicant's previous statement of public availability of the deposit (see Remarks filed on January 6, 2004).

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Maintained - Claim Rejections - 35 U.S.C. § 112

10. Previous rejection of Claims 13-15, 17, and 27 under 35 U.S.C. § 112, first paragraph, scope of enablement, because the specification, while being enabling for polynucleotides that encode SEQ ID NO:2, does not reasonably provide enablement for polynucleotides structurally related to SEQ ID NO:1, is maintained. Applicant's arguments have been fully considered but are not deemed persuasive for the following reasons.

Applicant argues that the prior art of record (Kullik *et al.* (2 references in J. Bacteriol. (1995)) identify the requisite structural features of OxyR transcriptional regulator activity such that claims as broad as 90% identical to SEQ ID NO:1 are fully enabled; the Examiner disagrees. The two Kullik *et al.* references describe mutational analysis of a single OxyR protein from *E. coli* leading to indication of 14 "important" residues on the *E. coli* OxyR. Firstly, OxyR from *E. coli* is only 37% identical (54% similar) to the OxyR of *C. glutamicum* disclosed in the instant application. Secondly, only 9 of the noted 14 residues in *E. coli* are also conserved in *C. glutamicum*. Lastly, only 4 of these residues are crucial to activity and/or DNA binding because the data on producing constitutively active mutants does not help enable critical residues for activity (for it is only in the mutation of these residues that activity is found). Thus, the art contains minimal information about OxyR proteins as a genus wherein the data would be applicable to any related protein. Thus, the breadth of the instant claims is not enabled to the full extent of its scope by the specification, even in combination with the prior art.

NEW ISSUES

Claim Rejections - 35 U.S.C. § 112

The following is a quotation of the first paragraph of 35 U.S.C. § 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claims 28 and 39 are rejected under 35 U.S.C. § 112, first paragraph, scope of enablement, because the specification, while being enabling for *Corynebacterium* comprising SEQ ID NO:1 or a sequence that encodes SEQ ID NO:2, does not reasonably provide enablement for *Corynebacterium* comprising a sequence with as little as 90% sequence identity to SEQ ID NO:1. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

The instant rejection is set forth because that dependent claims 28 and 39 do not limit what the overexpressed polynucleotide must be but merely further include a particular polynucleotide. This rejection is maintained above for Claims 13-15, 17, and 27. Express limitation that the overexpressed polynucleotide is SEQ ID NO:1 (or a sequence encoding SEQ ID NO:2) is required to limit the claims as it would seem they are intended.

Claim Rejections - 35 U.S.C. § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 15 and 16 are rejected under 35 U.S.C. § 102(e) as being anticipated by Nakagawa *et al.* (USPAP 20020197605). The instant claims are drawn to a polynucleotide at least 99% identical to SEQ ID NO:1 and polynucleotides consisting of SEQ ID NO:1 from 491-1471.

Nakagawa *et al.* teach SEQ ID NO:1, a 3,339,400 base pair sequence that encompasses the genome of *C. glutamicum*. A portion of this sequence (2,028,687-2,030,361) is 100% identical to Applicant's SEQ ID NO:1 (see attached alignment). Nakagawa *et al.* also teach SEQ ID NO:2114, a 981 base pair sequence that is exactly Applicant's SEQ ID NO:1 from 491-1471 (see attached alignment).

The Examiner notes that the instant claims are granted priority to DE 10110053.1 filed on March 2, 2001 as an earliest effective filing date; this document contains the first disclosure of 99% identical to SEQ ID NO:1 and polynucleotides consisting of 25 consecutive nucleotides.

Summary of Pending Issues

13. The following is a summary of the issues pending in the instant Office action:
- a) Claims 13-15, 17, 27, 28, and 39 stand rejected under 35 U.S.C. § 112, first paragraph, scope of enablement (breadth of structure/function).
 - b) Claims 15 and 16 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Nakagawa *et al.* (USPAP 20020197605).

Conclusion

14. Claims 1, 3-6, 10-12, 19-22, 26, and 29 are allowed. Claims 13-17, 27, 28, and 39 are not allowed for the reasons identified in the numbered sections of this Office action. Applicants must respond to the objections/rejections in each of the numbered sections in this Office action to be fully responsive in prosecution.

The instant Office action is **NON-FINAL** based on the new grounds of rejection set forth herein.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kathleen M Kerr whose telephone number is (571) 272-0931. The examiner can normally be reached on Monday through Friday, from 9:00am to 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathupura Achutamurthy can be reached on (571) 272-0928. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Kathleen M. Kerr', with a stylized, cursive script.

Kathleen M Kerr
Primary Examiner
Art Unit 1652

September 13, 2004

ALIGNMENT to Applicant

; Sequence 1, Application US/09738626
 ; Publication No. US20020197605A1
 ; GENERAL INFORMATION:
 ; APPLICANT: NAKAGAWA, SATOSHI
 ; APPLICANT: MIZOGUCHI, HIROSHI
 ; APPLICANT: ANDO, SEIKO
 ; APPLICANT: HAYASHI, MIKIRO
 ; APPLICANT: OCHIAI, KEIKO
 ; APPLICANT: YOKOI, HARUHIKO
 ; APPLICANT: TATEISHI, NAKO
 ; APPLICANT: SENOH, AKIHIRO
 ; APPLICANT: IKEDA, MASATO
 ; APPLICANT: OZAKI, AKIO
 ; TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
 ; FILE REFERENCE: 249-125
 ; CURRENT APPLICATION NUMBER: US/09/738,626
 ; CURRENT FILING DATE: 2000-12-18
 ; PRIOR APPLICATION NUMBER: JP 99/377484
 ; PRIOR FILING DATE: 1999-12-16
 ; PRIOR APPLICATION NUMBER: JP 00/159162
 ; PRIOR FILING DATE: 2000-04-07
 ; PRIOR APPLICATION NUMBER: JP 00/280988
 ; PRIOR FILING DATE: 2000-08-03
 ; NUMBER OF SEQ ID NOS: 7059
 ; SOFTWARE: PatentIn ver. 3.0
 ; SEQ ID NO 1
 ; LENGTH: 3309400
 ; TYPE: DNA
 ; ORGANISM: Corynebacterium glutamicum
 US-09-738-626-1

Query Match 100.0%; Score 1675; DB 10; Length 3309400;
 Best Local Similarity 100.0%; Pred. No. 0;
 Matches 1675; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1	GCCAACCGCAGGGCATTACCATCATGGTGCGCAACGCCATGTTCCGCCTTGTGGAGCTA	60
Db	2028687	GCCAACCGCAGGGCATTACCATCATGGTGCGCAACGCCATGTTCCGCCTTGTGGAGCTA	2028746
Qy	61	TTTGCTTATGAAAAGGAAGATCAGCTTAGTCAGATGACTGAATACCTGGATGAGGCTCCT	120
Db	2028747	TTTGCTTATGAAAAGGAAGATCAGCTTAGTCAGATGACTGAATACCTGGATGAGGCTCCT	2028806
Qy	121	GATTTCCGGTGCTGCGATGGATGCGTACTTTGATGAATATGCGGATCTTGATACCGGCCCG	180
Db	2028807	GATTTCCGGTGCTGCGATGGATGCGTACTTTGATGAATATGCGGATCTTGATACCGGCCCG	2028866
Qy	181	GCAGCTCGTGGACCAGAGTTCTTCAAGGTAGAGCACACGGGAAGAATGTGGGAGGTGCGT	240
Db	2028867	GCAGCTCGTGGACCAGAGTTCTTCAAGGTAGAGCACACGGGAAGAATGTGGGAGGTGCGT	2028926
Qy	241	CAGGTGGTGAAGGATCCAGAAGGTGATAATTCCTTCGCGTTTGTGGCCACCATTGATCTT	300
Db	2028927	CAGGTGGTGAAGGATCCAGAAGGTGATAATTCCTTCGCGTTTGTGGCCACCATTGATCTT	2028986
Qy	301	GATGCCTCTGATGATGCAGGTGAGGTGCGTTTTGGATCGCTGTCGATTGACCACAACCTAG	360
Db	2028987	GATGCCTCTGATGATGCAGGTGAGGTGCGTTTTGGATCGCTGTCGATTGACCACAACCTAG	2029046

Qy 361 GGGTTTGCGTCGAAAAGCAAGCACGCCTGGTGCCTGATTGAGCGGTTTTACCTATGGCG 420
 Db 2029047 GGGTTTGCGTCGAAAAGCAAGCACGCCTGGTGCCTGATTGAGCGGTTTTACCTATGGCG 2029106

Qy 421 CTTTGGCGCCGTCAAACGTGCCAGCGATTTTCATTATTATTTTCGTGCATTACCGTTAT 480
 Db 2029107 CTTTGGCGCCGTCAAACGTGCCAGCGATTTTCATTATTATTTTCGTGCATTACCGTTAT 2029166

Qy 481 AGTTATAGGCATGAGCAATAAAGAGTACCGGCCACACTCGCCCAGCTTCGCACCTTTGT 540
 Db 2029167 AGTTATAGGCATGAGCAATAAAGAGTACCGGCCACACTCGCCCAGCTTCGCACCTTTGT 2029226

Qy 541 CACCATCGCAGAATGCAAGCACTTTGGTACTGCTGCCACCAAGCTGTCCATTTTCGCAGCC 600
 Db 2029227 CACCATCGCAGAATGCAAGCACTTTGGTACTGCTGCCACCAAGCTGTCCATTTTCGCAGCC 2029286

Qy 601 ATCCCTCTCCCAGGCCTTGTGCGATTAGAAACAGGCCTGGGAGTTCAGCTGATTGAACG 660
 Db 2029287 ATCCCTCTCCCAGGCCTTGTGCGATTAGAAACAGGCCTGGGAGTTCAGCTGATTGAACG 2029346

Qy 661 CTCCACCCGCAAGGTCATTGTCACCCCAGCGGGCGAGAAGTTGCTGCCATTTCGCCAAATC 720
 Db 2029347 CTCCACCCGCAAGGTCATTGTCACCCCAGCGGGCGAGAAGTTGCTGCCATTTCGCCAAATC 2029406

Qy 721 CACCCTTGACGCGGCGGAGTCTTTCCTCTCCACGCCAAGGGCGCCAACGGTTCGCTCAC 780
 Db 2029407 CACCCTTGACGCGGCGGAGTCTTTCCTCTCCACGCCAAGGGCGCCAACGGTTCGCTCAC 2029466

Qy 781 TGGACCGTTGACCGTAGGCATCATCCCCACGGCGGCTCCTTACATTTTGCCGTCATGCT 840
 Db 2029467 TGGACCGTTGACCGTAGGCATCATCCCCACGGCGGCTCCTTACATTTTGCCGTCATGCT 2029526

Qy 841 GTCCATCGTGGATGAAGAATATCCAGATCTGGAACCTCACATCGTCGAGGACCAAACCAA 900
 Db 2029527 GTCCATCGTGGATGAAGAATATCCAGATCTGGAACCTCACATCGTCGAGGACCAAACCAA 2029586

Qy 901 GCATCTTCTCGCGTTGCTGCGCGACGGCGCCATCGACGTCGCCATGATGGCCCTGCCTTC 960
 Db 2029587 GCATCTTCTCGCGTTGCTGCGCGACGGCGCCATCGACGTCGCCATGATGGCCCTGCCTTC 2029646

Qy 961 TGAGGCACCAGGCATGAAGGAAATCCCCCTCTACGACGAAGACTTTATCGTCGTTACAGC 1020
 Db 2029647 TGAGGCACCAGGCATGAAGGAAATCCCCCTCTACGACGAAGACTTTATCGTCGTTACAGC 2029706

Qy 1021 TAGCGATCACCCCTTCGCCGGCCGCCAAGACTTAGAACTATCCGCCTTAGAAGACCTCGA 1080
 Db 2029707 TAGCGATCACCCCTTCGCCGGCCGCCAAGACTTAGAACTATCCGCCTTAGAAGACCTCGA 2029766

Qy 1081 TCTGCTGCTTCTCGACGACGGACACTGCCTCCACGACCAAATTGTGGACCTGTGCCGCCG 1140
 Db 2029767 TCTGCTGCTTCTCGACGACGGACACTGCCTCCACGACCAAATTGTGGACCTGTGCCGCCG 2029826

Qy 1141 CGGAGACATCAACCCCATTAGCTCCACTACTGCTGTCAACCGCGCATCCAGCCTTACCAC 1200
 Db 2029827 CGGAGACATCAACCCCATTAGCTCCACTACTGCTGTCAACCGCGCATCCAGCCTTACCAC 2029886

Qy 1201 CGTCATGCAGCTCGTCGTCGCCGGCCTTGGATCCACCTTGGTCCCAATCAGCGCAATCCC 1260
 Db 2029887 CGTCATGCAGCTCGTCGTCGCCGGCCTTGGATCCACCTTGGTCCCAATCAGCGCAATCCC 2029946

Qy 1261 ATGGGAATGCACCCGACCAGGACTGGCAACAGCCAACCTTCAACTCTGATGTCACCGCAA 1320
 Db 2029947 ATGGGAATGCACCCGACCAGGACTGGCAACAGCCAACCTTCAACTCTGATGTCACCGCAA 2030006

Qy 1321 CCGCCGCATTGGATTGGTGTACCGTTCCTCTTCTCTCGCGCCGAAGAGTTCGAACAGTT 1380
 |||
 Db 2030007 CCGCCGCATTGGATTGGTGTACCGTTCCTCTTCTCTCGCGCCGAAGAGTTCGAACAGTT 2030066

Qy 1381 TGCACTCATTTTGCAGCGCGCTTTCCAAGAAGCCGTCGCGCTTGCTGCCTCAACTGGCAT 1440
 |||
 Db 2030067 TGCACTCATTTTGCAGCGCGCTTTCCAAGAAGCCGTCGCGCTTGCTGCCTCAACTGGCAT 2030126

Qy 1441 CACCTTGAAGCAAAATGTCGCGGTAGCGCAGTAAGTTTTCTAGAGGTTTTCCAGAGTCA 1500
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 Db 2030127 CACCTTGAAGCAAAATGTCGCGGTAGCGCAGTAAGTTTTCTAGAGGTTTTCCAGAGTCA 2030186

Qy 1501 GCTACAAGCAAAAAGCCCTTTCCATTGATGCACACCAACGTGAGATTCAAGGGAAAGGGC 1560
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 Db 2030187 GCTACAAGCAAAAAGCCCTTTCCATTGATGCACACCAACGTGAGATTCAAGGGAAAGGGC 2030246

Qy 1561 TTTATTGATTGCAGAATGCCTACTGCATTAGCGGCGCTCCACCGGAATATTTCCACCACT 1620
 |||
 Db 2030247 TTTATTGATTGCAGAATGCCTACTGCATTAGCGGCGCTCCACCGGAATATTTCCACCACT 2030306

Qy 1621 GATCTGGCGGTAAATATGAACGGTAGACAGCATCATTACTGGCAGCACGATGATC 1675
 |||
 Db 2030307 GATCTGGCGGTAAATATGAACGGTAGACAGCATCATTACTGGCAGCACGATGATC 2030361

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; Sequence 2114, Application US/09738626
; Publication No. US20020197605A1
; GENERAL INFORMATION:
; APPLICANT: NAKAGAWA, SATOSHI
; APPLICANT: MIZOGUCHI, HIROSHI
; APPLICANT: ANDO, SEIKO
; APPLICANT: HAYASHI, MIKIRO
; APPLICANT: OCHIAI, KEIKO
; APPLICANT: YOKOI, HARUHIKO
; APPLICANT: TATEISHI, NAOKO
; APPLICANT: SENOH, AKIHIRO
; APPLICANT: IKEDA, MASATO
; APPLICANT: OZAKI, AKIO
; TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
; FILE REFERENCE: 249-125
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; CURRENT FILING DATE: 2000-12-18
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; PRIOR APPLICATION NUMBER: JP 00/159162
; PRIOR FILING DATE: 2000-04-07
; PRIOR APPLICATION NUMBER: JP 00/280988
; PRIOR FILING DATE: 2000-08-03
; NUMBER OF SEQ ID NOS: 7059
; SOFTWARE: PatentIn ver. 3.0
; SEQ ID NO 2114
; LENGTH: 981
; TYPE: DNA
; ORGANISM: Corynebacterium glutamicum
US-09-738-626-2114

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Query Match          58.6%; Score 981; DB 10; Length 981;
Best Local Similarity 100.0%; Pred. No. 2.1e-311;
Matches 981; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy      491 ATGAGCAATAAAGAGTACCGGCCCACACTCGCCCAGCTTCGCACCTTTGTCACCATCGCA 550
          |||
Db      1 ATGAGCAATAAAGAGTACCGGCCCACACTCGCCCAGCTTCGCACCTTTGTCACCATCGCA 60

Qy      551 GAATGCAAGCACTTTGGTACTGCTGCCACCAAGCTGTCCATTTGCGAGCCATCCCTCTCC 610
          |||
Db      61 GAATGCAAGCACTTTGGTACTGCTGCCACCAAGCTGTCCATTTGCGAGCCATCCCTCTCC 120

Qy      611 CAGGCACTTGTCGCATTAGAAACAGGCCTGGGAGTTCAGCTGATTGAACGCTCCACCCGC 670
          |||
Db      121 CAGGCACTTGTCGCATTAGAAACAGGCCTGGGAGTTCAGCTGATTGAACGCTCCACCCGC 180

Qy      671 AAGGTCATTGTACCCCCAGCGGGCGAGAAGTTGCTGCCATTGCGCCAAATCCA@CCCTTGAC 730
          |||
Db      181 AAGGTCATTGTACCCCCAGCGGGCGAGAAGTTGCTGCCATTGCGCCAAATCCA@CCCTTGAC 240

Qy      731 GCGGCGGAGTCTTTCTCTCTCCACGCCAAGGGCGCCAACGGTTCGCTCACTGGACCGTTG 790
          |||
Db      241 GCGGCGGAGTCTTTCTCTCTCCACGCCAAGGGCGCCAACGGTTCGCTCACTGGACCGTTG 300

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Qy	791	ACCGTAGGCATCATCCCCACGGCGGCTCCTTACATTTTGCCGTCAATGCTGTCCATCGTG	850
Db	301	ACCGTAGGCATCATCCCCACGGCGGCTCCTTACATTTTGCCGTCAATGCTGTCCATCGTG	360
Qy	851	GATGAAGAATATCCAGATCTGGAACCTCACATCGTCGAGGACCAAACCAAGCATCTTCTC	910
Db	361	GATGAAGAATATCCAGATCTGGAACCTCACATCGTCGAGGACCAAACCAAGCATCTTCTC	420
Qy	911	GCGTTGCTGCGCGACGGCGCCATCGACGTCGCCATGATGGCCCTGCCTTCTGAGGCACCA	970
Db	421	GCGTTGCTGCGCGACGGCGCCATCGACGTCGCCATGATGGCCCTGCCTTCTGAGGCACCA	480
Qy	971	GGCATGAAGGAAATCCCCCTCTACGACGAAGACTTTATCGTCGTTACAGCTAGCGATCAC	1030
Db	481	GGCATGAAGGAAATCCCCCTCTACGACGAAGACTTTATCGTCGTTACAGCTAGCGATCAC	540
Qy	1031	CCCTTCGCCGGCCGCCAAGACTTAGAACTATCCGCCTTAGAAGACCTCGATCTGCTGCTT	1090
Db	541	CCCTTCGCCGGCCGCCAAGACTTAGAACTATCCGCCTTAGAAGACCTCGATCTGCTGCTT	600
Qy	1091	CTCGACGACGGACACTGCCTCCACGACCAAATTGTGGACCTGTGCCGCCGCGGAGACATC	1150
Db	601	CTCGACGACGGACACTGCCTCCACGACCAAATTGTGGACCTGTGCCGCCGCGGAGACATC	660
Qy	1151	AACCCCATTAGCTCCACTACTGCTGTCACCCGCGCATCCAGCCTTACCACCGTCATGCAG	1210
Db	661	AACCCCATTAGCTCCACTACTGCTGTCACCCGCGCATCCAGCCTTACCACCGTCATGCAG	720
Qy	1211	CTCGTCGTCGCCGGCCTTGGATCCACCTTGGTCCCAATCAGCGCAATCCCATGGGAATGC	1270
Db	721	CTCGTCGTCGCCGGCCTTGGATCCACCTTGGTCCCAATCAGCGCAATCCCATGGGAATGC	780
Qy	1271	ACCCGACCAGGACTGGCAACAGCCAACTTCAACTCTGATGTCACCGCAAACCGCCGCATT	1330
Db	781	ACCCGACCAGGACTGGCAACAGCCAACTTCAACTCTGATGTCACCGCAAACCGCCGCATT	840
Qy	1331	GGATTGGTGTACCGTTCCTCTTCTCTCGCGCCGAAGAGTTTGAACAGTTTGCACCTCATT	1390
Db	841	GGATTGGTGTACCGTTCCTCTTCTCTCGCGCCGAAGAGTTTGAACAGTTTGCACCTCATT	900
Qy	1391	TTGCAGCGCGCTTTCCAAGAAGCCGTCGCGCTTGCTGCCTCAACTGGCATCACCTTGAAG	1450
Db	901	TTGCAGCGCGCTTTCCAAGAAGCCGTCGCGCTTGCTGCCTCAACTGGCATCACCTTGAAG	960
Qy	1451	CAAAATGTCGCGGTAGCGCAG	1471
Db	961	CAAAATGTCGCGGTAGCGCAG	981